



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,166	01/26/2004	Kazuaki Ono	00684.003574	6715
5514	7590	06/21/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			LEE, PETER	
30 ROCKEFELLER PLAZA				
NEW YORK, NY 10112			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/763,166

Applicant(s)

ONO ET AL

Examiner

Peter Lee

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 07 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Takizawa et al. (US 4682878).

Takizawa et al. teaches an electrophotographic apparatus that includes a fixing device comprising: an endless belt (fig. 1 part 2); a roller (part 3) (ir. First rotatable member) for rotatably supporting the belt, and the roller is known to have a degree of elasticity (ie. elastic layer) and be formed so that an outer diameter is larger in a longitudinal central portion than in opposite longitudinal end portions (fig. 7 part 3c); a fixing roller (fig. 1 part 1) (ie. second rotatable member) that is disposed opposite to the said roller (part 3), the fixing roller cooperates with the said roller to form a nip in which an image on a recording material is heated (col. 4 lines 28-48); a spring member (part 29) for urging the said roller towards the fixing roller (part 1) at opposite ends of the said roller shaft; the nip has a width larger in the opposite longitudinal end portions than in the longitudinal central portion .

***Claim Rejections - 35 USC § 103***

Art Unit: 2852

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurotaka et al. (US 6243559) in view of Takizawa et al. (US 4682878).

Kurotaka teaches a thermal roller fixing device (fig. 23) (ie. image heating device) comprising: a fixing belt (fig. 23 part 3) (ie. endless belt) for heating an image on a recording material (col. 9 lines 25-35); a fixing roller (fig. 23 part 2) (ie. first rotatable member), having an elastic surface (col. 1 line 59) (ie. elastic layer), for supporting the belt, a pressure roller (fig. 23 part 4) (ie. second rotatable member), pressed toward said fixing member with said belt interposed there between (col. 9 lines 45-47), for forming the contact pressure portion between the fixing belt and pressure roller (col. 9 lines 34-37) (ie. nip for nipping and feeding the recording material); and pressure springs that are taught to be used to press the fixing roller into the pressure roller (ie. urging means for urging opposite ends of a rotation shaft of said first rotatable member).

Kurotaka also teaches a surface hardness of said fixing roller can be smaller than a surface hardness of said pressing roller without any ill effect (col. 28 lines 37-43), and said pressing roller has a uniform diameter throughout (note: col. 24 lines 57-60) (ie. outer diameter of said second rotatable member in the opposite longitudinal end portions is substantially equal to that in the longitudinal central portion).

Kurotaka does not teach the fixing roller being shaped so that an outer diameter which is

larger in a longitudinal central portion than in opposite longitudinal end portions.

Takizawa et al. teaches a similar fixing device that has a roller (part 2) that is used to support an endless belt (part 2), and is opposed to a fixing roller (part 1) so as to form a nip in between for passing a recording sheet for fixing a toner image. The said roller is taught by Takizawa to have a larger longitudinal central portion in comparison to its opposite longitudinal end portions (fig. 7; col. 5 lines 35-58).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention taught by Kurotaka by having the fixing roller be shaped in a crown shape as taught by Takizawa et al.. One of ordinary skill in the art would have been motivated to do so in order to obtain a uniform pressure force between rollers in the fixing portion (col. 5 lines 50-58).

5. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurotaka et al. in view of Takizawa et al. as applied to claims 7-10 above, and further in view of Fukutome (US 20020181979).

Kurotaka in view of Takizawa teaches all of the limitations as laid out above supra.

Kurotaka in view of Takizawa does not explicitly teach the pressure/fixing roller, that opposes an endless fixing belt supporting roller, being made to have a core metal and an elastic layer laid upon it such as a rubber.

Fukutome teaches a pressure roller (fig. 1 part 2) that opposes a fixing roller (part 1) that supports a fixing belt, being made of a core metal section (fig. 4 part 2A) and having a layer of an elastic silicone rubber (paragraph [0034]).

Art Unit: 2852

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the invention taught by Kurotaka in view of Takizawa to have the pressure/fixing roller that opposes a fixing belt support roller, be made with a core metal section and a layer of elastic rubber on top as taught by Fukutome. One of ordinary skill in the art would have known this type of roller being used in a fixing device to be notoriously well known in the art to provide a stable core and provide a heat resistant layer on top for resisting the heat needing in a fixing device (paragraph [0034]).

#### *Response to Amendment*

Amendments to the claim and specification are entered.

#### *Conclusion*

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2852

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Response to Arguments*

7. Applicant's arguments with respect to claims 7-14 have been considered but are moot in view of the new ground(s) of rejection.

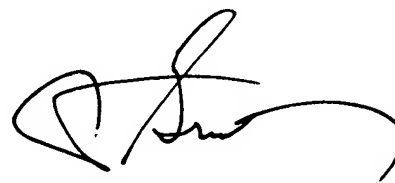
Examiner has entered the new claims and acknowledges applicants request to cancel previous claims 1-6. Examiner believes the current office action to lay out clearly the prior art teaches that teach the limitations as applicant has written out in the new claims 7-14.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Lee whose telephone number is 571-272-2846. The examiner can normally be reached on mon-fri 9:00 am-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PL 6/17/2005



Arthur T. Grimley  
Supervisory Patent Examiner  
Technology Center 2800